



Office of Energy Projects Energy Infrastructure Update *For July 2016*

Natural Gas Highlights

- Transco received authorization to place into service its Rock Springs Expansion Project which will provide 192 MMcf/d of bi-directional capacity to Old Dominion Electric Cooperative's 1,000 MW electric generation plant in Cecil County, MD.
- Columbia placed into service the facilities necessary to increase the maximum allowable operating pressure (MAOP) of its Line PM-117 located in Johnson and Martin Counties, KY, and the replacement facilities on its Line P-240 located in Lawrence County, KY. This increase in MAOP will provide 20 MMcf/d of additional capacity on Columbia's existing system.
- Transco received authorization to construct and operate its New York Bay Expansion Project which will provide 115 MMcf/d of capacity to its existing system in PA, NJ, and NY to serve the supply needs of National Grid in NY.
- Transco received authorization to construct and operate its Virginia Southside Expansion II Project which will provide 250 MMcf/d of capacity to serve VEPCO's proposed 1,580 MW power station in Greensville County, VA.
- Eastern Shore received authorization to construct and operate its System Reliability Project which will enhance the reliability and flexibility of Eastern Shore's existing pipeline system in DE.
- Eastern Shore received authorization to construct and operate its White Oak Mainline Expansion Project which will provide 45 MMcf/d of capacity to serve Calpine Energy's proposed Garisson Energy Center, 309 MW power plant located in Dover, DE.
- Freeport LNG received authorization to increase its maximum peak day LNG production capacity at its export terminal currently under construction on Quintana Island, near the City of Freeport, Brazoria County, TX, by 340 MMcf/d.
- Gulf South requests authorization to construct and operate its St. Charles Parish Expansion Project which would provide 133.33 MMcf/d of capacity to Entergy Louisiana's proposed 980 MW electric generation facility to located near Montz, LA..
- Millennium requests authorization to construct and operate its Eastern System Upgrade Project which would provide 223 MMcf/d of capacity from Millennium's Corning Compressor Station in Corning, NY to an existing interconnection with Algonquin located in Ramapo, NY.
- Northern Natural requests authorization to construct and operate its Cedar Station Upgrade Project which would fulfill a contractual obligation to provide an increase in delivery pressure to Northern States Power Company's proposed Black Dog Generating Station located in Eagan, MN.
- Annova Entities requests authorization to construct and operate a LNG export facility to be located on the Brownsville Ship Channel in Cameron County, TX. The proposed LNG facility would have an export deliverability of 900 MMcf/d from six liquefaction trains.
- Spire STL Pipeline commenced the Commission's pre-filing process to construct and operate Spire STL Pipeline Project which would provide 400 MMcf/d of capacity from an interconnection with Rockies Express Pipeline in Scott County, IL to existing pipeline facilities to be purchased by Spire STL Pipeline located in St. Louis County, MO to serve markets in the eastern portion of MO.
- The Commission vacated the certificate issued to DCP Midstream to construct and operate its LaSalle Residue Line in Weld County, CO. The LaSalle Residue Line would have provided 230 MMcf/d of capacity from DCP Midstream's new non-jurisdictional natural gas processing plant to an interconnection with Colorado Interstate Gas.
- The Commission vacated the certificate issued to Leaf River Storage to construct and operate Cavern 3A and associated pipeline and compression facilities at its Leaf River Storage Project located in Smith, Jasper, and Clarke Counties, MS. Cavern 3A would have provided 12 Bcf of working gas.
- Sabine Pass LNG withdrew its proposal to site, construct, and operate truck loading facilities at the Sabine Pass LNG import and export terminal in Cameron Parish, LA.



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Natural Gas Activities in July 2016

Status	No. of Projects	Storage Capacity (Bcf)	Deliverability (MMcf/d)	Capacity (MMcf/d)	Miles of Pipeline	Compression (HP)
Pipeline						
Placed in Service	2			212.0	11.2	4,000
Certificated	4			410.0	20.1	67,795
Proposed	4			756.3	85.8	49,800
Storage						
Placed in Service	0	0.0	0.0			0
Certificated	0	0.0	0.0			0
Proposed	0	0.0	0.0			0
LNG (Import & Export)						
Placed in Service	0	0	0			0
Certificated (Import/Export)	1	0	340			0
Proposed (Export)	1	6.8	900			0

Source: Staff Database

Natural Gas Activities through July 31, 2016 January through July 31, 2015

Status	No. of Projects	Storage Capacity (Bcf)	Deliverability (MMcf/d)	Capacity (MMcf/d)	Miles of Pipeline	Compression (HP)
Pipeline						
Placed in Service through July 31, 2015	17 15			2,882.3 5,304.7	150.0 105.5	93,695 106,095
Certificated through July 31, 2015	37 20			13,411.9 5,806.0	997.8 295.1	1,044,454 207,573
Storage						
Placed in Service through July 31, 2015	0 3	0.0 3.4	0 53			0 0
Certificated through July 31, 2015	0 2	0.0 2.7	0 0			0 0
LNG (Import & Export)						
Placed in Service through July 31, 2015	1 0	0 0	700 0			0 0
Certificated (Import/Export) through July 31, 2015	4 1	10.2 0	3,181 1,400			0 0

Source: Staff Database

Hydropower Highlights (nonfederal)

- Wisconsin Electric Power Company placed in service the Twin Falls Hydroelectric Project No. 11831 with a total installed capacity of 9.0 MW. The project is located on the Menominee River near Iron Mountain, MI on the WI side.
- Northern Illinois Hydropower, LLC was issued an original license for the 6.8 MW Brandon Road Hydroelectric Project No. 12717. The project will be located at the U.S. Army Corps of Engineers' Brandon Road Lock and Dam on the Des Plaines River near the Village of Rockdale, Will County, IL.
- Water Street Land, LLC filed a small-hydro exemption from licensing application for the proposed 0.360 MW Natick Pond Dam Hydroelectric Project No. 14680. The project would be located on the Pawtuxet River, in the Towns of Warwick and West Warwick, Kent County, RI.



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Hydropower Project Activities in July 2016

Status	Conventional		Pumped Storage		Hydrokinetic		Total No. of Projects	Total Capacity (MW)
	No.	Capacity (MW)	No.	Capacity (MW)	No.	Capacity (MW)		
Filed								
License	0	0	0	0	0	0	0	0
10-MW Exemption	1	0.360	0	0	0	0	1	0.360
Capacity Amendment	0	0	0	0	0	0	0	0
Conduit Exemption	0	0	0	0	0	0	0	0
Issued								
License	1	6.800	0	0	0	0	1	6.800
10-MW Exemption	0	0	0	0	0	0	0	0
Capacity Amendment	0	0	0	0	0	0	0	0
Conduit Exemption	0	0	0	0	0	0	0	0
Placed in Service								
License	0.5	6.100	0	0	0	0	0.5	6.100
10-MW Exemption	0	0	0	0	0	0	0	0
Capacity Amendment	0.5	2.900	0	0	0	0	0.5	2.900
Conduit Exemption	0	0	0	0	0	0	0	0

Source: Staff Database

Hydropower Project Activities Year to Date (through July 31, 2016)

Status	Conventional		Pumped Storage		Hydrokinetic		Total No. of Projects	Total Capacity (MW)
	No.	Capacity (MW)	No.	Capacity (MW)	No.	Capacity (MW)		
Filed								
License	2.5	50.049	0.5	300.000	0	0	3	350.049
10-MW Exemption	1	0.360	0	0	0	0	1	0.360
Capacity Amendment	1	0.100	0	0	0	0	1	0.100
Conduit Exemption	2	0.530	0	0	0	0	2	0.530
Issued								
License	6	51.062	0	0	0	0	6	51.062
10-MW Exemption	1	0.220	0	0	0	0	1	0.220
Capacity Amendment	3	6.310	0	0	0	0	3	6.310
Conduit Exemption	0	0	0	0	0	0	0	0
Placed in Service								
License	3.5	204.700	0	0	0	0	3.5	204.700
10-MW Exemption	0	0	0	0	0	0	0	0
Capacity Amendment	2.5	26.500	0	0	0	0	2.5	26.500
Conduit Exemption	0	0	0	0	0	0	0	0

Source: Staff Database



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Electric Generation Highlights

- Portland General Electric Co.'s 440 MW natural gas-fired Carly Generating Station Phase 1 Project in Morrow County, OR is online.
- Stillwater Power's 55 MW natural gas-fired Stillwater Phase 2 Project in Payne County, OK is online.
- White Pine Solar LLC's 101 MW White Pine Solar Project in Taylor County, GA is online. The power generated is sold to Georgia Power Co. under long-term contract.
- 62SK 8ME LLC's 100 MW Springbok Solar Farm Phase 1 Project in Kern County, CA is online. The power generated is sold to Southern California Public Power Authority under long-term contract.
- White Oak Solar LLC's 76.5 MW White Oak Solar Project in Burke County, GA is online. The power generated is sold to Georgia Power Co. under long-term contract.
- Summer Solar LLC's 25 MW Summer Solar of Lancaster Project in Los Angeles County, CA is online. The power generated is sold to Southern California Public Power Authority under long-term contract.
- First Solar Asset Management LLC's 10.8 MW Rancho SECO Solar Phase 2 Expansion Project in Sacramento County, CA is online.
- Algonquin Power Co.'s 10 MW Bakersfield Solar Phase 2 Expansion Project in Kern County, CA is online. The power generated is sold to Pacific Gas and Electric Co. under long-term contract.
- KCP&L Greater Missouri Operations Co.'s 3 MW Greenwood (MO) Solar Phase 2 Expansion Project in Sacramento County, CA is online.
- SR Houston Holdings LLC's 3 MW Houston Solar Project in Chickasaw County, MS is online. The power generated is sold to Tennessee Valley Authority under long-term contract.

New Generation In-Service (New Build and Expansion)

	July 2016		January – July 2016 Cumulative		January – July 2015 Cumulative	
Primary Fuel Type	No. of Units	Installed Capacity (MW)	No. of Units	Installed Capacity (MW)	No. of Units	Installed Capacity (MW)
Coal	0	0	0	0	1	3
Natural Gas	4	495	53	7,099	48	2,854
Nuclear	0	0	0	0	0	0
Oil	0	0	5	12	7	10
Water	2	9	26	199	20	151
Wind	0	0	23	2,199	22	2,474
Biomass	0	0	18	47	22	227
Geothermal Steam	0	0	0	0	1	45
Solar	10	333	153	2,216	151	930
Waste Heat	0	0	0	0	0	0
Other *	0	0	4	0	8	0
Total	16	837	280	11,765	280	6,694

Sources: Data derived from Velocity Suite, ABB Inc. and The C Three Group LLC which include plants with nameplate capacity of 1 MW or greater. The data may be subject to update.



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Total Available Installed Generating Capacity

	Installed Capacity (GW)	% of Total Capacity
Coal	295.99	25.24%
Natural Gas	507.57	43.29%
Nuclear	107.06	9.13%
Oil	44.95	3.83%
Water	100.31	8.55%
Wind	76.17	6.50%
Biomass	16.69	1.42%
Geothermal Steam	3.88	0.33%
Solar	18.07	1.54%
Waste Heat	1.16	0.10%
Other*	0.77	0.07%
Total	1,172.62	100.00%

Sources: Data derived from Velocity Suite, ABB Inc. and The C Three Group LLC which include plants with nameplate capacity of 1 MW or greater. The data may be subject to update.

* "Other" includes purchased steam, tires, and miscellaneous technology such as batteries, fuel cells, energy storage, and fly wheel.

Electric Transmission Highlights

- The New York Independent System Operator released "Power Trends 2016: The changing energy landscape." The report estimates that 4,700 circuit miles of the state's 11,000 circuit miles high voltage electric transmission lines will need to be replaced in 30 years.

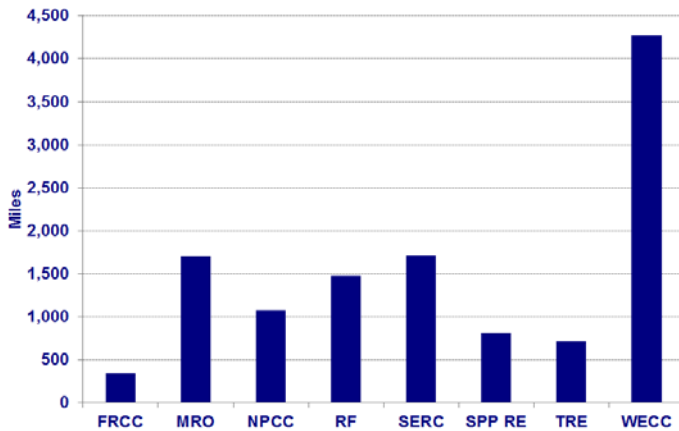
Voltage (kV)	Transmission Projects Completed				Proposed Transmission Projects In-Service by July 2018	
	July 2016	July 2015	January – July 2016 Cumulative	January – December 2015 Cumulative	High Probability of Completion	All
	Line Length (miles)					
≤230	0.0	0.0	163.4	682.3	2,324.2	4,640.8
345	0.0	0.0	163.4	1,223.5	2,051.5	3,474.4
500	0.0	0.0	43.0	355.0	698.3	3,986.3
Total U.S.	0.0	0.0	369.8	2,260.8	5,074.0	12,101.5

Sources: Data derived from Staff Database and U.S. Electric Transmission Projects ©2016 The C Three Group, LLC.

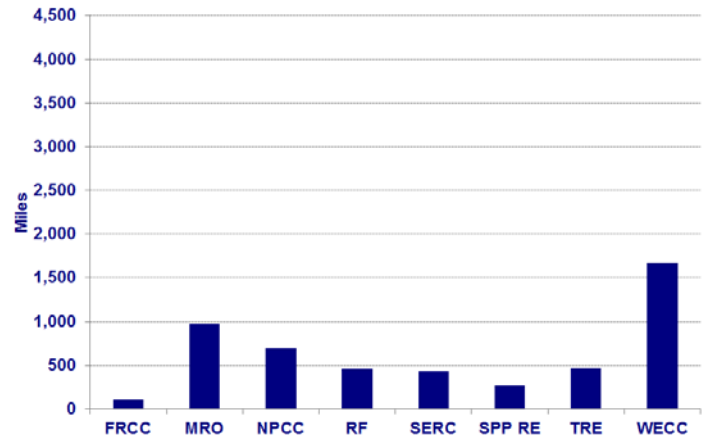


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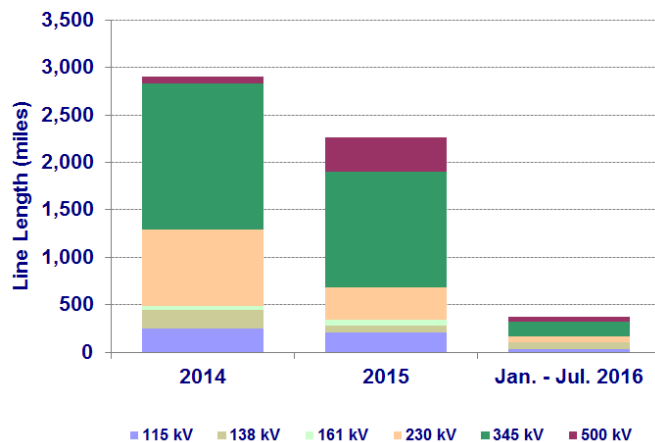
All Transmission Projects with a Proposed In-Service Date by July 2018



Transmission Projects with a High Probability of being completed by July 2018



New Transmission Projects by Voltage



Sources: Data derived from Staff Database and U.S. Electric Transmission Projects ©2016 The C Three Group, LLC.

Disclaimer: This Report contains analyses, presentations, and conclusions that may be based on or derived from the data sources cited, but do not necessarily reflect the positions or recommendations of the data providers.